UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF ALLOWANCE AND FEE(S) DUE

86421   7590   02/15/2012
Patent Capital Group - Cisco
2816 Lago Vista Lane
Rockwall, TX 75032

EXAMINER
CHANKONG, DOHM

ART UNIT	PAPER NUMBER
2452	

DATE MAILED: 02/15/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,884	02/15/2001	Amit Phadnis	CSCO-002 (CPOL 94701)	4202

TITLE OF INVENTION: AGGREGATION DEVICES PROCESSING KEEP-ALIVE MESSAGES OF POINT-TO-POINT SESSIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1740	$0	$0	$1740	05/15/2012

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u>

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

	(Depositor's name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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nonprovisional	NO	$1740	$0	$0	$1740	05/15/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHANKONG, DOHM	2452	709-223000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❏ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❏ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE   (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❏ Individual ❏ Corporation or other private group entity ❏ Government

4a. The following fee(s) are submitted:
❏ Issue Fee
❏ Publication Fee (No small entity discount permitted)
❏ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
❏ A check is enclosed.
❏ Payment by credit card. Form PTO-2038 is attached.
❏ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
❏ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.   ❏ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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PTOL-85 (Rev. 02/11) Approved for use through 08/31/2013.   OMB 0651-0033   U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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09/785,884	02/15/2001	Amit Phadnis	CSCO-002 (CPOL 94701)	4202

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1880 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1880 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 02/11)

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

	Application No.	Applicant(s)
Notice of Allowability	09/785,884	PHADNIS ET AL.
	Examiner	Art Unit	
	DOHM CHANKONG	2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *11/29/2011*.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are *1-53*.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

      Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

/DOHM CHANKONG/
Primary Examiner, Art Unit 2452

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas Frame on February 6, 2012.

The application has been amended as follows:

1.   (Currently Amended) A method comprising:

receiving in an aggregation device a plurality of keep-alive messages in a communication network;

sending an aggregated request packet which includes data indicating that a plurality of statuses ~~status~~ of point to point (PPP) sessions is requested;

receiving an aggregated reply packet from a peer aggregation device, wherein the aggregated reply packet includes information indicating ~~indicates a~~ respective statuses ~~status~~ of at least some of the plurality of PPP sessions, wherein content of a local status table is updated with the respective statuses ~~status~~ of the at least some of the plurality of PPP sessions;

maintaining the local status table in said aggregation device, wherein said local status table indicates [[a]] current statuses ~~status~~ of sessions supported by said aggregation device;

updating said local status table with the information in said aggregated reply

packet; and

generating a proxy keep-alive reply according to said local status table.

10.   (Currently Amended) A method comprising:

examining an aggregated request packet to determine that a plurality of statuses

status of a plurality of point-to-point sessions is requested;

determining the plurality of statuses status of each of said plurality of point-to-

point (PPP) sessions;

generating an aggregated reply packet indicating the status plurality of statuses of

said plurality of point-to- point sessions; and

sending said aggregated reply packet to a peer aggregation device, wherein the

aggregated reply packet indicates a including information indicating respective statuses

status of at least some of the plurality of PPP sessions, wherein content of a remote status

table is updated with the respective statuses status of the at least some of the plurality of

PPP sessions, wherein a local status table is maintained and indicates [[a]] current

statuses status of sessions supported by the aggregation device, and wherein the local

status table is updated with the information in the aggregated reply packet, and wherein a

proxy keep-alive reply message is generated according to the local status table.

15.   (Currently Amended) An aggregation device for processing a plurality of keep-

alive messages generated by a corresponding plurality of end systems, comprising:

an input interface receiving said plurality of keep-alive messages;

a message aggregator coupled to said input interface, said message aggregator examining said plurality of messages and generating data according to a format indicating that a <u>plurality of statuses</u> <s>status</s> of point to point (PPP) sessions is requested;

an output interface sending an aggregated request packet on a communication network to a peer aggregation device, said aggregated request packet containing said data generated by said message aggregator, wherein the aggregation device is further configured to receive an aggregated reply packet from the peer aggregation device, wherein the aggregated reply packet <u>includes information indicating respective statuses</u> <s>indicates a status</s> of at least some of the plurality of PPP sessions, wherein content of a local status table is updated with the <u>respective statuses</u> <s>status</s> of the at least some of the plurality of PPP sessions;

an encapsulator encapsulating said data in a packet suitable for transmission on said communication network; and

a de-aggregator configured to receive the aggregated reply packet from said peer aggregation device, wherein said aggregated reply packet <u>includes information indicating the respective statuses</u> <s>indicates the status</s> of the at least some of said plurality of PPP sessions, said de-aggregator updating said remote status table with the information in said aggregated reply packet.

21.   (Currently Amended) An aggregation device for processing a plurality of keep-alive messages generated by a corresponding plurality of end systems, comprising:

means for receiving said plurality of keep-alive messages;

means for generating an aggregated request packet which includes data indicating
that a <u>plurality of statuses</u> ~~status~~ of point to point (PPP) sessions is requested;

means for sending said aggregated request packet to a peer aggregation device;

means for receiving an aggregated reply packet from the peer aggregation device,
wherein the aggregated reply packet <u>includes information indicating respective statuses</u>
~~indicates a status~~ of at least some of the plurality of PPP sessions, wherein content of a
local status table is updated with the <u>respective statuses</u> ~~status~~ of the at least some of the
plurality of PPP sessions;

means for maintaining the local status table in said aggregation device, wherein
said local status table indicates [[a]] current <u>statuses</u> ~~status~~ of sessions supported by said
aggregation device;

means for updating said local status table with <u>the</u> information in said aggregated
reply packet; and

means for generating a proxy keep-alive reply according to said local status table.

25.   (Currently Amended) An aggregation device for processing an aggregated request
packet, wherein said aggregated request packet is received from a peer aggregation
device and indicates that a <u>plurality of statuses</u> ~~status~~ of a plurality of point-to-point
sessions are requested, said aggregation device comprising:

means for examining said aggregated request packet to determine that the
<u>plurality of statuses</u> ~~status~~ of said plurality of point-to-point sessions is requested;

means for determining <u>the plurality of statuses</u> ~~status~~ of each of said plurality of
point-to-point sessions;

means for generating an aggregated reply packet indicating the <u>plurality of</u> <u>statuses</u> <s>status</s> of said plurality of point-to-point sessions;

means for sending said aggregated reply packet to said peer aggregation device, wherein the aggregated reply packet <u>includes information indicating</u> <s>indicates a status</s> <u>respective statuses</u> of at least some of the plurality of PPP sessions, wherein content of a remote status table is updated with the <u>respective statuses</u> <s>status</s> of the at least some of the plurality of PPP sessions, wherein a local status table is maintained and indicates [[a]] current <u>statuses</u> <s>status</s> of sessions supported by the aggregation device, and wherein the local status table is updated with <u>the</u> information in the aggregated reply packet, and wherein a proxy keep- alive reply message is generated according to the local status table.

30.   (Currently Amended) An aggregation device for processing an aggregated request packet, wherein said aggregated request packet is received from a peer aggregation device and indicates that a <u>plurality of statuses</u> <s>status</s> of a plurality of point-to-point sessions are requested, said aggregation device comprising:

an input interface configured for receiving said aggregated request packet;

a de-encapsulator configured for examining said aggregated request packet to determine that the <u>plurality of statuses</u> <s>status</s> of said plurality of point-to-point (PPP) sessions is requested;

a reply generator configured for determining the <u>plurality of statuses</u> <s>status</s> of each of said plurality of point-to-point sessions, and generating an aggregated reply

packet including information indicating the plurality of statuses status of each of said

plurality of point-to-point sessions; and

an output interface configured for sending said aggregated reply packet to said

peer aggregation device, wherein content of a local status table is updated with the status

of the PPP sessions, wherein the local status table indicates [[a]] current statuses status of

particular sessions supported by the aggregation device, and wherein the local status table

is updated with the information in the aggregated reply packet, and wherein a proxy

keep-alive reply message is generated according to the local status table.

37.   (Currently Amended) A non-transitory medium including one or more sequences

of instructions, wherein execution of said one or more sequences of instructions by one or

more processors causes the actions of:

receiving in an aggregation device a plurality of keep-alive messages;

generating in said aggregation device an aggregated request packet which

includes data indicating that a plurality of statuses status of PPP sessions is requested;

receiving an aggregated reply packet from a peer aggregation device, wherein the

aggregated reply packet includes information indicating respective statuses indicates a

status of at least some of the plurality of PPP sessions, wherein content of a local status

table is updated with the respective statuses status of the at least some of the plurality of

PPP sessions;

updating said remote status table with the information in said aggregated reply

packet; and

generating a proxy keep-alive reply according to said remote status table.

42.   (Currently Amended) A non-transitory medium including one or more sequences

of instructions, wherein execution of said one or more sequences of instructions by one or

more processors causes the actions of:

examining said aggregated request packet to determine that a <u>plurality of statuses</u>

~~status~~ of a plurality of point-to-point sessions is requested;

determining the <u>plurality of statuses</u> ~~status~~ of each of said plurality of point-to-

point sessions;

generating an aggregated reply packet indicating the <u>plurality of statuses</u> ~~status~~ of

said plurality of point-to- point sessions;

sending said aggregated reply packet to a peer aggregation device; and

receiving the aggregated reply packet from the peer aggregation device, wherein

the aggregated reply packet <u>includes information indicating respective statuses</u> ~~indicates a~~

~~status~~ of at least some of the plurality of PPP sessions, wherein content of a local status

table is updated with the <u>respective statuses</u> ~~status~~ of the at least some of the plurality of

PPP sessions, wherein the local status table indicates [[a]] current <u>statuses</u> ~~status~~ of

sessions supported by the aggregation device, and wherein the local status table is

updated with <u>the</u> information in the aggregated reply packet, and wherein a proxy keep-

alive reply message is generated according to the local status table.

47.   (Currently Amended) A system, comprising:

a first aggregation device receiving a plurality of keep-alive messages generated

by a corresponding plurality of end systems, each of said plurality of keep-alive messages

being designed to request a <u>plurality of statuses</u> ~~status~~ of a ~~corresponding~~ <u>a plurality of</u>

point to point (PPP) session implemented on a communication network, said first

aggregation device generating an aggregated request packet which includes data

indicating that the plurality of statuses status of said plurality of PPP sessions is

requested, and sending said aggregated request packet; and

a peer aggregation device receiving said aggregated request packet and including

information indicating the plurality of statuses status of said plurality of PPP sessions in

an aggregated reply packet, said peer aggregation packet sending said aggregated reply

packet to said first aggregation device, wherein content of a local status table is updated

with the plurality of statuses status of the plurality of PPP sessions, wherein the local

status table indicates [[a]] current statuses status of sessions supported by the first

aggregation device, and wherein the local status table is updated with the information in

the aggregated reply packet, and wherein a proxy keep-alive reply message is generated

according to the local status table.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DOHM CHANKONG whose telephone number is

(571)272-3942. The examiner can normally be reached on Monday to Friday [10 am - 6

pm].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thu Nguyen can be reached on (571)272-6967. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DOHM CHANKONG/
Primary Examiner, Art Unit 2452